

**FUTURE FISHERIES IMPROVEMENT PROGRAM
GRANT APPLICATION**

(Please fill in the highlighted areas)

all sections (IA, IB, IC, etc.) must be addressed or the application will be considered invalid

I. APPLICANT INFORMATION

- A. Applicant Name: Trout Unlimited
- B. Mailing Address: 312 N. Higgins Ave, Suite 200
- C. City: Missoula State: MT Zip: 59802
- Telephone: 406-540-2944 E-mail: rroberts@tu.org
- D. Contact Person: Rob Roberts
- Address if different from Applicant:
- City: State: Zip:
- Telephone: 406-540-2944 E-mail: rroberts@tu.org
- E. Landowner and/or Lessee Name (if other than Applicant): City of Missoula
- Mailing Address: 435 Ryman St.
- City: Missoula State: MT. Zip: 59802
- Telephone: (406) 553-6000 E-mail:

II. PROJECT INFORMATION*

- A. Project Name: Cobban Ditch Fish Screen
- River, stream, or lake: Rattlesnake Creek
- Location: Township: 13N Range: 19W Section: S2
- Latitude: 46.911010° Longitude: -113.964320° within project (decimal degrees)
- County: Missoula
- B. Purpose of Project:
- The Cobban Ditch Fish Screen Project is intended to eliminate native and wild fish entrainment in an irrigation ditch on Rattlesnake Creek. The project will improve fish passage at all life stages and allow for better control of water through the diversion.

C. Brief Project Description:

The Cobban ditch is a 1.6 mile long irrigation canal which has an allocated flow of 1.57 cfs from Rattlesnake Creek. Rattlesnake Creek is a primary spawning tributary for both native bull trout and westslope cutthroat, as well as fluvial rainbow and brown trout from the Clark Fork River. The ditch diverts water from May to October and is used primarily for small pastures and orchards. This diversion is one of six irrigation ditches on Rattlesnake Creek. During the early 2000's Montana Fish, Wildlife and Parks and Lolo National Forest installed Brencaill, manual cleaning fish screens on the irrigation ditches. When the screens were installed, they were intended as a temporary fix, have remained for almost 15 years and are in a state of disrepair. Trout Unlimited, MT FWP and partners have initiated a program to replace the fish screens with modern screening technology. TU has installed new fish screens two of the ditches in 2015 and 2016 and is working on plans to screen the rest of the diversion structures on the creek.

Cobban Ditch is located on the east side of Rattlesnake Creek, approximately 1,500 feet downstream of the Mountain Water Company Dam. The diversion consists of a concrete structure with metal headgate. During seasonal low flows the users build a rock wall into the creek to keep the ditch flowing. The screen was designed to allow for the legally allotted water to flow down the ditch, while providing flow to an outlet pipe, returning fish to Rattlesnake Creek. The fish screen requires considerable maintenance (up to four times a day) during high flows due to clogging debris. The users have begun to drill large holes in the fish screen in hopes of alleviating consistent clogging. The return pipe has also caused considerable clogging, causing the users to remove the pipe at times. The function of the screen is thus impaired and fails to prevent fish entrainment when the screen overflows.

This project involves removing the existing Brencaill screen and replacing with a new vertical plate, paddle wheel-driven fish screen. The new structure will be located just downstream of the headgate (at the existing screen site) and include a bypass/return pipe to Rattlesnake Creek.

A preliminary site survey and design was completed in the spring of 2016. Final design work is currently in progress. Please see attached planview. The screen is scheduled to be installed in November 2017.

D. Length of stream or size of lake that will be treated: 1,500 feet

E. Project Budget:

Grant Request (Dollars): \$ 14,000

Contribution by Applicant (Dollars): \$ 3,695 In-kind \$ 2,200
(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): \$ 17,000 In-kind \$ 0
(attach verification - See page 2 budget template)

Total Project Cost: \$ 36,895

F. Attach itemized (line item) budget – see template

G. Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support and fish biologist support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete supplemental questionnaire (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

- H. Attach land management and maintenance plans that will ensure protection of the reclaimed area.

III. PROJECT BENEFITS*

- A. What species of fish will benefit from this project?:

This project will prevent future entrainment of native and wild fish species. Past surveys have documented Bull trout, westslope cutthroat, and mountain whitefish in the six irrigation ditches throughout the Rattlesnake watershed.

- B. How will the project protect or enhance wild fish habitat?:

The completion of the Cobban ditch project will protect the movement of native and wild fish accessing juvenile habitat, spawning habitat and thermal refugia.

- C. Will the project improve fish populations and/or fishing? To what extent?:

Preventing entrainment of juvenile and adult migratory fish in Rattlesnake Creek is critical to fish populations in the creek and for recruitment to the Clark Fork river.

- D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

Yes. The site is on public land currently accessible via the Lower Sawmill Gulch Trail, managed by the City of Missoula.

- E. The project agreement includes a 20-year maintenance commitment. Please discuss your ability to meet this commitment.

The screen will need to be monitored and periodically maintained to ensure proper function. Water users on the ditch have already demonstrated their commitment to maintenance by cleaning the existing Brencaill screen for nearly 15 years. Trout Unlimited will visit the screen on a regular basis to ensure that it is functioning properly and to clean the screen, if necessary.

- F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?:

While this project will not directly correct the causes of habitat degradation on Rattlesnake Creek, it will mitigate the effects by improving fish populations and preventing losses of native and wild fish to irrigation diversions.

- G. What public benefits will be realized from this project?:

Public benefits will be realized via the recruitment of native and wild fish to the Clark Fork River.

- H. Will the project interfere with water or property rights of adjacent landowners? (explain):

No. Existing water rights will be maintained.

- I. Will the project result in the development of commercial recreational use on the site?: (explain):

No.

J. Is this project associated with the reclamation of past mining activity?:

No.

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature:

Date:

Sponsor (if applicable):

***Highlighted boxes will automatically expand.**

**Mail To: Montana Fish, Wildlife & Parks
Habitat Protection Bureau
PO Box 200701
Helena, MT 59620-0701**

**E-mail To: Michelle McGree
mmcgree@mt.gov
(electronic submissions MUST be signed)**

**Incomplete or late applications will be rejected and returned to applicant.
Applications may be rejected if this form is modified.**

*****Applications may be submitted at anytime, but must be signed and received by the Future Fisheries Program Officer in Helena before December 1 and June 1 of each year to be considered for the subsequent funding period.*****

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS			
					FUTURE FISHERIES REQUEST	IN-KIND SERVICES**	IN-KIND CASH	TOTAL
<u>Personnel***</u>								
Survey	4	hour	\$75.00	\$ 300.00		300.00		\$ 300.00
Engineering	40	each	\$100.00	\$ 4,000.00		2,000.00	2,000.00	\$ 4,000.00
Permitting	8	hour	\$50.00	\$ 400.00		400.00		\$ 400.00
Oversight	28	hour	\$50.00	\$ 1,400.00		1,400.00		\$ 1,400.00
				\$ -				\$ -
			Sub-Total	\$ 6,100.00	\$ -	\$ 4,100.00	\$ 2,000.00	\$ 6,100.00
<u>Travel</u>								
Mileage	200	0.5	\$0.50	\$ 100.00		100.00		\$ 100.00
Per diem				\$ -				\$ -
			Sub-Total	\$ 100.00	\$ -	\$ 100.00	\$ -	\$ 100.00
<u>Construction Materials****</u>								
Native grass seed mix	5	lbs	\$12.00	\$ 60.00			60.00	\$ 60.00
Structural fill delivered	10	cubic yards	\$100.00	\$ 1,000.00	1,000.00			\$ 1,000.00
12-ft long x 2-ft high vertical flat panel screen with steel box	1	each	\$23,500.00	\$ 23,500.00	10,000.00		13,500.00	\$ 23,500.00
8-inch HDPE fish return pipe	40	feet	\$4.00	\$ 160.00			160.00	\$ 160.00
			Sub-Total	\$ 24,720.00	\$ 11,000.00	\$ -	\$ 13,720.00	\$ 24,720.00
<u>Equipment and Labor</u>								
Labor	20	hour	\$37.50	\$ 750.00			750.00	\$ 750.00
Screen Delivery	1	each	\$500.00	\$ 500.00			500.00	\$ 500.00
Mini Excavator	20	hour	\$85.00	\$ 1,700.00	1,000.00		700.00	\$ 1,700.00
Skid Steer	20	hour	\$95.00	\$ 1,900.00	1,000.00		900.00	\$ 1,900.00
Compactor	1	day	\$125.00	\$ 125.00			125.00	\$ 125.00
			Sub-Total	\$ 4,975.00	\$ 2,000.00	\$ -	\$ 2,975.00	\$ 4,975.00
<u>Mobilization</u>								
Mobilization	1	each	\$1,000.00	\$ 1,000.00	1,000.00		-	\$ 1,000.00
			Sub-Total	\$ 1,000.00	\$ 1,000.00	\$ -	\$ -	\$ 1,000.00
TOTALS				\$ 36,895.00	\$ 14,000.00	\$ 4,200.00	\$ 18,695.00	\$ 36,895.00

*Units = feet, hours, inches, etc. Please do not use lump sum.

**Can include in-kind materials. Justification for in-kind labor (e.g. hourly rates used for calculations). Describe here or in text: Costs for the following items were estimated using a similar project on the Hughes-Fredline Ditch, which was completed in 2015 and funded in part by a Future Fisheries Grant: Survey, Labor, fabricated Fish Screen, Fish Screen Cover, Screen Delivery, Mobilization, Mini-Excavator, Skid Steer, Dump Hopper, Compactor, Rock, and Plants.

Rattlesnake Creek Cobban fish screen
BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Reminder: Government salaries cannot be used as in-kind match

***The Review Panel suggests that design and oversight costs associated with a proposed project not exceed 15% of the total project budget. If design and oversight costs are in excess of 15%, applications must include a minimum of two competitive bids for the cost of undertaking the project

****The Review Panel recommends a maximum fencing cost of \$1.50 per foot

MATCHING CONTRIBUTIONS (do not include requested funds)

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL	Secured? (Y/N)
WestSlope Chapter Trout Unlimited	\$ -	\$ 15,000.00	\$ 15,000.00	Y
Trout Unlimited	\$ 2,200.00	\$ 3,695.00	\$ 5,895.00	Y
Northwestern Energy	\$ -	\$ 2,000.00	\$ 2,000.00	Y
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTALS	\$ 2,200.00	\$ 20,695.00	\$ 22,895.00	

J. Is this project associated with the reclamation of past mining activity?:

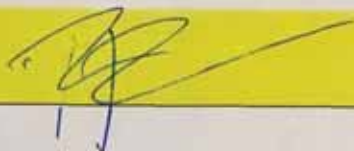
No.

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Applicant Signature:



Date:

5/23/2017

Sponsor (if applicable):

*Highlighted boxes will automatically expand.

Mail To: Montana Fish, Wildlife & Parks
Habitat Protection Bureau
PO Box 200701
Helena, MT 59620-0701

E-mail To: Michelle McGree
mmcgree@mt.gov
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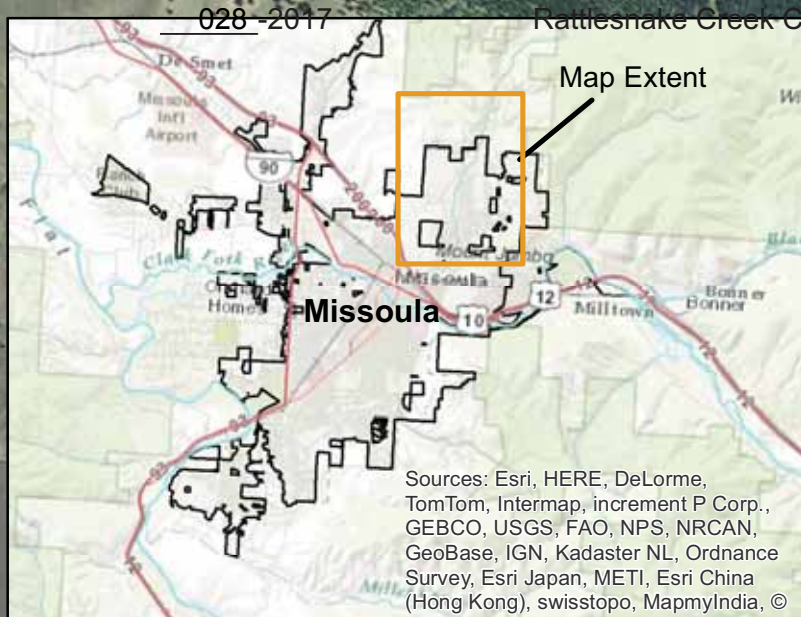
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028-2017

Rattlesnake Creek Cobban fish screen



Map Extent



Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, ©

Quast

Williams

Cobban

Hollenbeck

Hamilton-Day

Hughes-Fredline

— Rattlesnake Creek

— Lower Irrigation Ditches

■ US Forest Service

■ Missoula County

■ City of Missoula

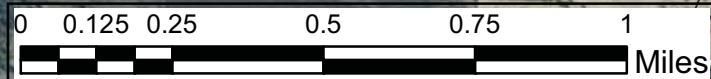
★ Proposed Fish Screen Replacement

Existing Fish Screens

● Brencaill

▲ Coanda

✚ McKay Self-Cleaning



Cobban Ditch Fish Screen
-2017

Rattlesnake Creek Cobban fish screen

Legend

★ Cobban Ditch Fish Screen

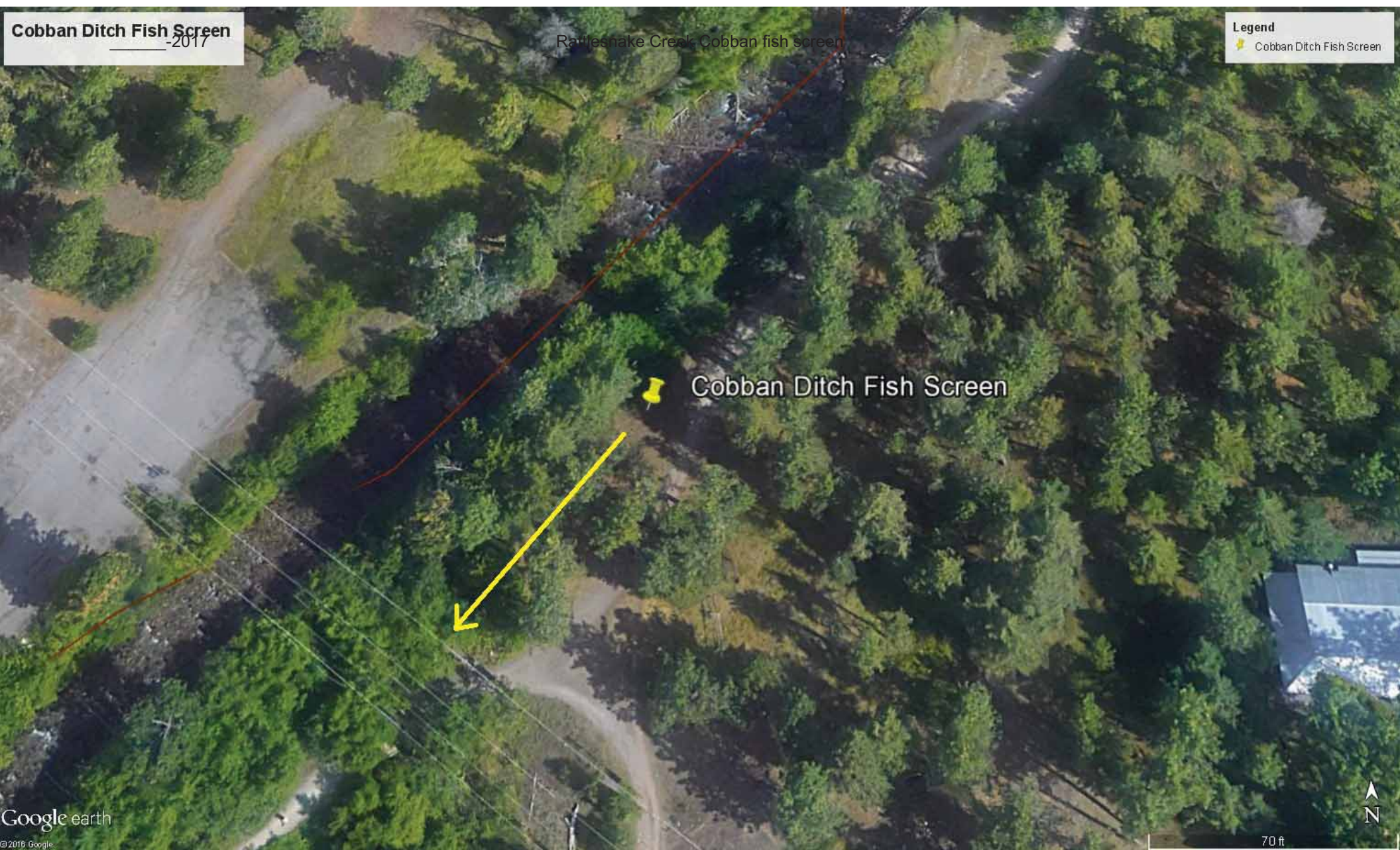
Cobban Ditch Fish Screen

Google earth

© 2016 Google

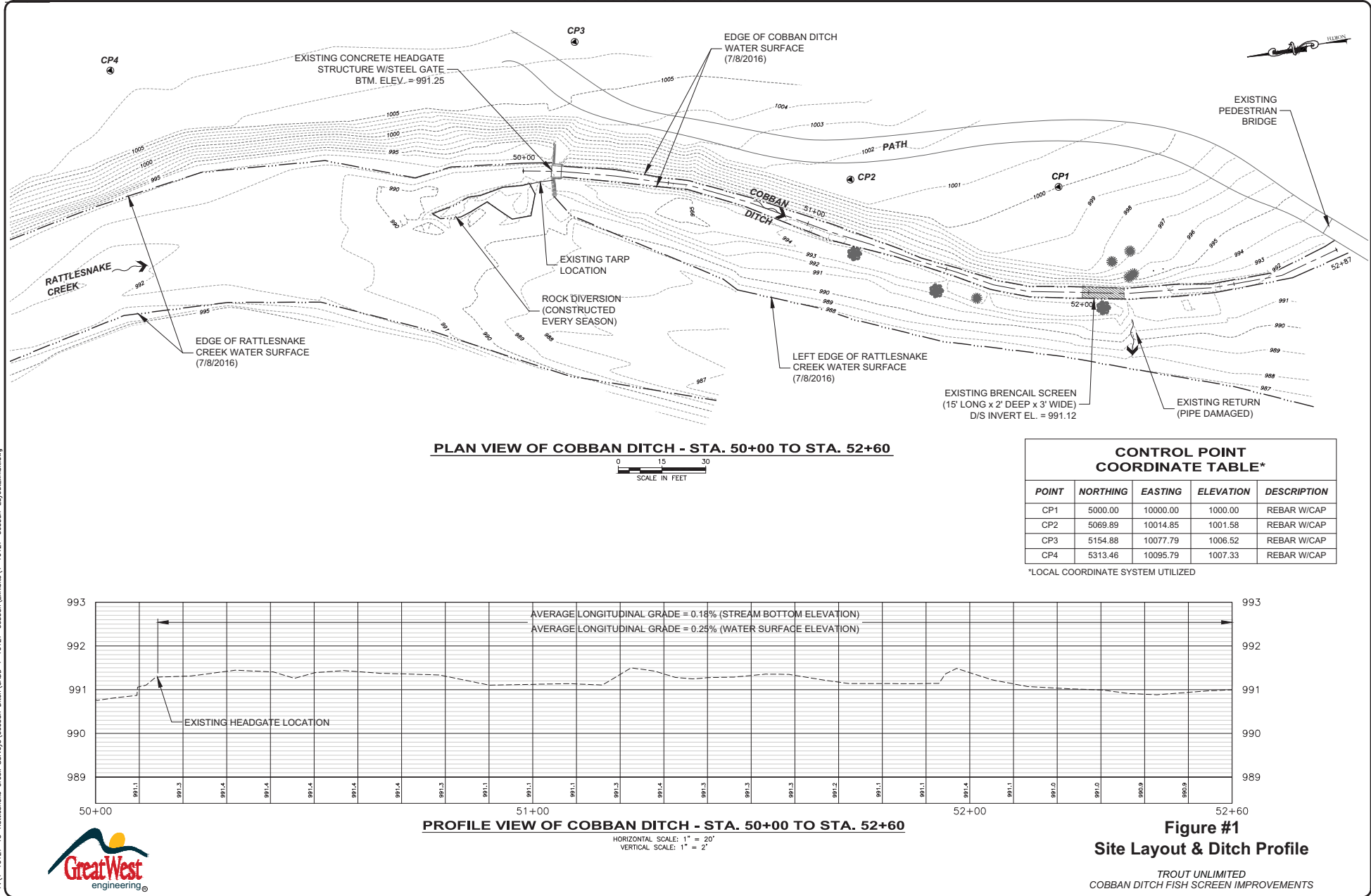
70 ft

N



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Rattlesnake Creek Cobban fish screen



Cobban Ditch Fish Screen Project



Existing Brencaill fish screen on Cobban ditch



Fish screen replacement site on Cobban Ditch along Rattlesnake Creek

Cobban Ditch Fish Screen Project



Example paddle-wheel drive vertical plate fish screen